

Applicant: John S. Lee, et al.
Serial No.: 09/501,434
Title: MEDIUM HANDLER AND ORGANIZER
AMENDMENT AND RESPONSE

Atty. Docket No. 510.030US01
Filed: February 10, 2000

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first and a second compact disc on first and second parallel planes, the first gripping location comprises a centering feature to axially align the first compact disc with the first gripping location, wherein the first and second compact discs are held in fixed axial positions while the first and second compact discs are engaged by the gripping head.

Remarks

Telephone Interview

Applicant thanks Examiner Chu for the courtesy of a telephone interview on December 4, 2001. The Munro reference and claim 1 were discussed. Applicant agreed to prepare a response to the final action. No further agreement was reached.

Rejections Under 35 U.S.C. § 112

Claims 1, 2 and 4-31 were rejected under 35 U.S.C. § 103 as being unpatentable over Kahle U.S. Patent 5,518,325 in view of Munro U.S. Patent 5,500,803

The Munro reference teaches a magnetic tape system that uses two mechanical grippers to move tapes between locations. The reference system and mechanics are substantially more complex than the present invention. That is, there are two gripping heads that each hold one tape. These two heads move the tapes independent of each other. As such, each tape moves about its axis independently of the other tape when the tapes are held by the heads.

As explained and claimed, the present invention provides one gripping head that can hold two compact discs. As shown in Figures 3 and 4, the gripper head holds two discs at a time. Applicant believes that a single gripper head to hold multiple discs is distinct from the cited art, however, amendments to the claims have been proposed to expedite issuance of the present application. Specifically, the claims have been amended to more clearly describe that the present invention does not use multiple independent gripper heads. While the discs are held by the present gripper head, they are maintained in a fixed position relative to each other.

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Although a gripped disc may rotate about its axis, the axial relation of the discs is maintained. The present invention, therefore, is distinct from the cited references. Specifically, the two heads of Munro move the tapes independent of each other, thus defining multiple heads.

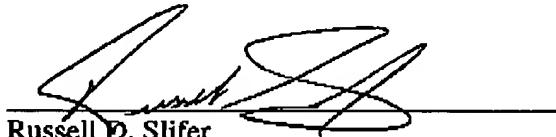
The claim amendments are fully supported by the specification and figures. No new matter has been added. Further, there is no need to perform an additional search because the original searched claims were directed to a non-plural gripper head to hold multiple discs.

CONCLUSION

Applicant believes that the claims are in condition for allowance and respectfully requests a Notice of Allowance be issued in this case. If the Examiner has any questions regarding this application, please contact the undersigned attorney at (612) 312-2202.

Respectfully submitted,

Date: 12/11/01


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Marked Up Version Showing Changes Made

In the Claims:

1. (Amended) A compact disc processing system comprising:
 - a printer for printing indicia on a first compact disc;
 - a recorder for recording information on the first compact disc; and
 - a transporter carriage for holding the first compact disc and moving the first compact disc between the recorder and printer, the transporter carriage comprises a single horizontally rotatable gripping head having first and second gripping locations each for respectively holding the first and a second compact disc simultaneously, such that the first and second compact discs are held in fixed relative positions while the first and second compact discs are engaged by the gripping head.

9. (Amended) A compact disc processing system comprising:
 - a supply station for holding a plurality of blank compact discs;
 - a printer for printing indicia on a first compact disc, the printer includes an extendable drawer adapted to receive the first compact disc;
 - a recorder for recording information on the first compact disc, the recorder includes an extendable draw to receive the first compact disc; and
 - a transporter carriage for simultaneously holding the first and second compact discs on first and second planes, the transporter carriage is movable in both vertical and a horizontal directions to place and pick up the first compact disc from the drawers of both the recorder and printer, the transporter carriage is movable in both vertical and a horizontal directions to pick up one of the plurality of blank compact discs held at the supply location,
the transporter carriage comprises a pickup arm and a gripping head attached to one end of the pickup arm, the gripping head has first and second gripping locations each for respectively holding the first and second compact discs simultaneously, such that the first and

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second compact discs maintain a fixed axial position while engaged by the gripping head, and the gripping head is rotatable about a horizontal axis of the pick up arm.

14. (Amended) A method of operating a disc processing system comprising a printer for printing indicia on a compact disc, a recorder for recording information on the compact disc, and a transporter carriage for simultaneously holding at least two compact discs in a fixed axial relation, the method comprising:

gripping a first compact disc with the transporter carriage;

moving the transporter carriage to the recorder and placing the first compact disc in the recorder;

moving the transporter carriage to a supply location and gripping a second compact disc with the transporter carriage while the first compact disc is in the recorder;

removing the first compact disc from the recorder with the transporter carriage, such that the transporter carriage simultaneously grips both the first and second compact discs on first and second planes, respectively;

placing the second compact disc in the recorder after the first compact disc has been removed; and

moving the transporter carriage to the printer and placing the first compact disc in the printer.

18. (Amended) A method of operating a disc processing system comprising a printer for printing indicia on a compact disc, a recorder for recording information on the compact disc, and a transporter carriage for simultaneously holding two compact discs, the method comprises in order of:

gripping a first compact discs with the transporter carriage;

moving the transporter carriage to the recorder and placing the first compact disc in the recorder;

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moving the transporter carriage to a supply location and gripping a second compact disc with the transporter carriage while the first compact disc is in the recorder;

removing the first compact disc from the recorder with the transporter carriage, such that the transporter carriage simultaneously grips both the first and second compact discs on first and second planes, respectively, and the first and second compact discs are held in fixed axial positions while the first and second compact discs are engaged by the gripping head;

placing the second compact disc in the recorder after the first compact disc has been removed; and

moving the transporter carriage to the printer and placing the first compact disc in the printer.

19. (Amended) A method of operating a disc processing system comprising a printer for printing indicia on a compact disc, a recorder for recording data on the compact disc, and a transporter carriage for simultaneously holding at least two compact discs on first and second planes such that the two discs are held in fixed relative positions, the method comprising:

either recording data on the first compact disc using a recorder, or printing indicia on the first compact disc with the printer; and

gripping a second compact disc using the transporter carriage while the first compact disc is located in either the recorder or the printer.

21. (Amended) A method of operating a disc processing system comprising a printer for printing indicia on a compact disc, a recorder for recording information on the compact disc, and a transporter carriage for simultaneously holding at least two compact discs, the method comprising:

gripping a first compact disc located in the printer with the transporter carriage;
removing the first compact disc from the printer;
moving the transporter carriage to the recorder and gripping a second compact disc located in the recorder with the transporter carriage, wherein the first and second compact

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discs are held in fixed axial positions while the first and second compact discs are engaged by the gripping head;

removing the second compact disc from the recorder;
placing the first compact disc in the recorder;
moving the transporter carriage to the printer; and
placing the second compact disc in the printer.

22. (Amended) A method of operating a disc processing system comprising a printer for printing indicia on a compact disc, a recorder for recording information on the compact disc, and a transporter carriage for simultaneously holding at least two compact discs on first and second planes such that the two discs are held in fixed relative positions, the method comprising:

gripping a first compact disc located in the recorder with the transporter carriage;
removing the first compact disc from the recorder;
moving the transporter carriage to the printer and gripping a second compact disc located in the printer with the transporter carriage;
removing the second compact disc from the printer;
placing the first compact disc in the printer;
moving the transporter carriage to the recorder; and
placing the second compact disc in the recorder.

23. A method of operating a disc processing system comprising a recorder for recording data on the compact disc, and a transporter carriage for simultaneously holding at least two compact discs on first and second planes, the method comprising:

gripping a first compact disc located in the recorder with the transporter carriage;
removing the first compact disc from the recorder; and
placing a second compact disc in the recorder without releasing the first compact disc or moving the transporter carriage from the recorder to a compact disc supply location.

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24. (Amended) A method of operating a disc processing system comprising a printer for printing indicia on a compact disc, and a transporter carriage for simultaneously holding at least two compact discs on first and second planes such that the two discs are held in fixed relative positions, the method comprising:

gripping a first compact disc located in the printer with the transporter carriage;

removing the first compact disc from the printer; and

placing a second compact disc in the printer without releasing the first compact disc or moving the transporter carriage from the printer to a compact disc supply location.

25. (Amended) A method of operating a disc processing system comprising a processing station to perform a processing operation on a compact disc, and a transporter carriage for simultaneously holding at least two axially aligned compact discs on first and second planes, the method comprising:

gripping a first compact disc located in the processing station with the transport carriage;

removing the first compact disc from the processing station; and

placing a second compact disc in the processing station without releasing the first compact disc or moving the transporter carriage from the processing station to a compact disc supply location.

27. (Amended) A compact disc processing system comprising:

a printer for printing indicia on a first compact disc;

a recorder for recording information on the first compact disc; and

a transporter carriage comprising a gripping head that is rotatable about a horizontal axis, the gripping head includes first and second gripping locations to respectively hold the first and a second compact disc on first and second parallel planes, wherein the first and second compact discs maintain a fixed axial relation while engaged by the gripping head.

28. (Amended) A compact disc processing system comprising:

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a printer for printing indicia on a first compact disc;
a recorder for recording information on the first compact disc;
a transporter carriage moveable in both a horizontal and a vertical direction, the transporter carriage comprises a gripping head that is rotatable about a horizontal axis, the gripping head includes first and second gripping locations to respectively hold the first and a second compact disc on first and second parallel planes, wherein the first and second compact discs maintain a fixed axial relation while engaged by the gripping head; and
a vacuum pump coupled to the gripping head to selectively provide a vacuum to the first and second gripping locations.

30. (Amended) A compact disc processing system comprising:

a printer for printing indicia on a first compact disc;
a recorder for recording information on the first compact disc;
a transporter carriage moveable in both a horizontal and a vertical direction; and
a gripping head coupled to the transporter carriage and rotatable about a horizontal axis, the gripping head includes first and second gripping locations to respectively hold the first and a second compact disc on first and second parallel planes, the first gripping location comprises a centering feature to axially align the first compact disc with the first gripping location, wherein the first and second compact discs are held in fixed axial positions while the first and second compact discs are engaged by the gripping head.